

The globe is so placed that the eyes form a solid part of it, and thus furnish a support for the whole apparatus.

Besides the two eyes the only visible external organs are: *a.* the last joints of the antennæ; *b.* the two horny, bowed palpiform organs of the mouth; and *c.* the proboscis. Everything else on the head, except the bristles of the antennæ and of the margins of the eyes, disappears, and all the visible organs exhibit a change of position. Thus the antennæ occur on the side of the globe opposite to the eyes, or quite in front. Only the last joint of each projects from the globular head, on the surface of which they form as it were a double hook directed downwards. They still however retain some power of movement, and the fly appears to employ them in various ways. The proboscis is directed obliquely backwards, below the eyes; it also retains some power of motion, and the fly can elongate or contract it at pleasure. It appears to be an important part of the apparatus, serving to press the globular head forwards, or rather to give it a firm support in the pressure which it exerts upon the obstacles before it.

The two horny palpiform organs which lie between the antennæ and the mouth are also of importance in these operations. They form a pair of hooks turned downwards and resting with their convex sides against the globular head, so that as this expands their extremities are pressed into the larva-skin, where they produce the commencement of the transverse cleft of the aperture, which is afterwards completed by the general expansion of the head.

Besides this transverse cleft in the larva-skin, there is usually a second crack running from the apex and dividing the cap which is thrown off, into two nearly equal portions: this is produced by the wedge-like action of the antennæ.

When the expansion of the head has reached its maximum, it is maintained for a few seconds, and then the head again contracts; but if it has not done its business sufficiently, it is again dilated until the desired result is obtained. In this way the author observed that a *Tachina* which he had enclosed in a narrow glass tube, tried more than a hundred times to expel the cork by the expansion of its head.

The expansion of the head commences by a prolongation of the front of the face between the angles of the eyes: this forms a conical point, having the antennæ at its apex. The object of this is sufficiently apparent: the fly can introduce this point into small holes and crevices in the obstacles which interpose between it and the open air; these are then enlarged by the globular expansion of the head, which is doubtless retained in its situation by the action of the antennæ.—*Wiegmann's Archiv*, xxi. p. 189.

On the apparent Absence of a Nervous System in the Nemoptera lusitanica. By M. LÉON DUFOUR.

The author states that in examining numerous specimens of the *Nemoptera lusitanica*, a species of Neuropterous insect abundant in Spain and Portugal, he was unable to find any trace of a nervous

system. The head when opened, instead of presenting a distinct brain or cephalic ganglia, only contained a small quantity of an amorphous and liquid pulp. In the thorax also, the large nerves passing into the femora could not be detected. M. Graells of Madrid was likewise unable to discover any traces either of ganglia or nerves.

M. Léon Dufour states that the tracheæ are not plentiful, so that the respiration cannot be very energetic, and the locomotive power of the animal is therefore small. In the structure of the alimentary organs, the *Nemoptera* differs from the *Panorpidæ*, in which family it has usually been placed, and M. Léon Dufour thinks that its food is of a fluid nature.—*Comptes Rendus*, Dec. 31, 1855, p. 1204.

METEOROLOGICAL OBSERVATIONS FOR FEB. 1856.

Chiswick.—February 1. Light clouds : frosty. 2. Cloudy. 3. Frosty : fine throughout. 4. Overcast : slight rain. 5. Very fine : boisterous at night. 6. Densely clouded : boisterous. 7. Uniformly overcast : rain. 8. Densely overcast : fine : cloudy. 9. Exceedingly fine. 10. Cloudy. 11. Foggy : rain : overcast. 12. Rain : fine : rain at night. 13. Rain : showery throughout. 14. Rain : fine. 15. Cloudy : very fine : foggy at night. 16. Foggy : very fine : foggy. 17. Hazy : overcast : foggy at night. 18. Overcast : slight snow. 19. Hazy : cold and raw. 20. Cloudy and cold throughout. 21. Slight rain : small hail occasionally. 22. Overcast : slight rain. 23. Fine throughout : cloudy at night. 24. Fine : overcast : clear and frosty. 25. Overcast throughout. 26. Cloudy : slight rain. 27. Overcast. 28. Very slight drizzle : overcast : cloudy. 29. Foggy : cloudy : frosty.

Mean temperature of the month	41°·54
Mean temperature of Feb. 1855	28·01
Mean temperature of Feb. for the last thirty years	38·71
Average amount of rain in Feb.	1·543 inch.

Boston.—Feb. 1—3. Fine. 4, 5. Cloudy. 6. Rain A.M. and P.M. 7, 8. Cloudy : rain A.M. 9. Cloudy. 10. Cloudy : rain A.M. 11. Cloudy : rain P.M. 12. Rain A.M. 13. Cloudy : rain P.M. 14, 15. Fine. 16—22. Cloudy. 23, 24. Fine. 25—28. Cloudy. 29. Foggy.

Sandwick Manse, Orkney.—Feb. 1. Cloudy A.M. : showers, thaw P.M. 2. Cloudy A.M. : fine P.M. 3. Fine, bright A.M. : fine, clear P.M. 4. Fine, cloudy A.M. : fine, clear P.M. 5. Fine, drops A.M. : fine, cloudy P.M. 6. Bright A.M. : rain P.M. 7. Bright A.M. : showers P.M. 8. Cloudy A.M. and P.M. 9. Drops A.M. : clear P.M. 10. Bright A.M. : clear, showers P.M. 11. Bright A.M. : clear, fine P.M. 12. Rain A.M. : showers P.M. 13. Bright A.M. : cloudy P.M. 14. Snow-showers A.M. : showers P.M. 15. Rain A.M. : cloudy P.M. 16. Drizzle, showers A.M. : drizzle P.M. 17. Damp A.M. and P.M. 18. Cloudy A.M. and P.M. 19. Cloudy, frost A.M. : clear, fine P.M. 20. Bright A.M. : cloudy, fine P.M. 21. Bright A.M. : clear P.M. 22. Bright A.M. : showers, clear P.M. 23. Bright A.M. : cloudy P.M. 24. Cloudy A.M. : clear P.M. 25. Rain A.M. : showers, clear, aurora P.M. 26. Cloudy A.M. : drizzle P.M. 27. Showers A.M. : fine, cloudy P.M. 28. Drizzle A.M. : damp P.M. 29. Cloudy A.M. and P.M.

Mean temperature of Feb. for previous twenty-nine years ...	38°·01
Mean temperature of this month	40·84
Mean temperature of Feb. 1855	31·64
Average quantity of rain in Feb. for fifteen previous years ...	3·25 inches.

The storm which raged so violently in the South of Scotland on the 6th and 7th did not reach Orkney or the North of Scotland, but again we had this month as well as during the gale of last month a great fall of the barometer, which stood at 28·49 on the 6th at midnight.